

HISTORIC AMERICAN ENGINEERING RECORD

MASTER PHOTO CAPTION LIST

Dam No. 4 Hydroelectric Plant, 1909  
Shepherdstown vicinity  
Berkeley County, WV

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- WV-27-1 Credit PEM. Old Swartz Mill on Water Street, Martinsburg, WV. Acquired by Edison Illuminating Co. in 1889. Served as first generating plant for Martinsburg. Photo c. 1890.
- WV-27-2 Credit PEM. View of Martinsburg Power Company steam generating plant. From right to left: original 1889 generating building, transformer room, new generating room and, adjacent to draft stack is boiler room addition. Photo c. 1911.
- WV-27-3 Credit PEM. Interior of Martinsburg plant showing two MacIntousch Seymore steam engines and one Taylor steam engine belt driving (from left to right) a sperry 30 light, 220 Volt generator, a Westinghouse 900 light, 2200 Volt generator, a Ball 80 light arc generator, and two Edison, 900 light, 220 Volt generators. Note switchboard to left. Photo c. 1896.
- WV-27-4 Credit PEM. Interior of Martinsburg Plant; on right showing Taylor 150 hp steam engine belt-connected to a Warren 150 KW, 2200 Volt a.c. generator. On left, a Fisher 400 hp steam engine belt-connected to a Warren 200 KW, 2200 Volt a.c. generator. In center, also belt-connected to Fisher 400 hp engine is a Ball 120 light, arc-light generator. Photo c. 1905.
- WV-27-5 Credit PEM. Interior of Martinsburg Plant, showing Atlas Corliss 1000 hp steam engine and sheave wheel which powered a Warren 500 KW revolving field generator (which doesn't appear in this photo). Photo c. 1907.
- WV-27-6 Credit PEM. Interior of Martinsburg Plant, showing installation of Warren 500 KW, 2200 Volt revolving field a.c. generator and sheave wheel, to be connected to Atlas Corliss 1000 hp steam engine (which doesn't appear in this photo). Photo c. 1907
- WV-27-7 Credit PEM. Interior of Martinsburg Plant, showing Warren 500 KW, 2200 Volt generator, with horizontal rope driven sheave wheel to right, belt-driven exciter in center, and switchboard on left. Photo c. 1907.

#### Exterior Views

- WV-27-8 Early stage of power house construction at Dam No. 4, showing two stiff leg derricks used to excavate limestone for power house building. Photo c. 1907. Credit PEM.
- WV-27-9 Credit JTL. View of Dam No. 4 Power house from across river on Maryland side.
- WV-27-10 Credit JTL. View of Dam No. 4 Power house from across river on Maryland side.

- WV-27-11 Credit PED. View of Downstream elevation showing two of three tail race openings and completion of roof. Photo c. 1909.
- WV-27-12 Credit PED. View of tail race and dam showing dumping of construction rubble into river bed by rail car; and preparations for pouring a concrete cap onto tail race wall. Photo c. 1909.
- WV-27-13 Credit PED. Construction view of building and excavation of tail races. Photo c. 1909.
- WV-27-14 Credit PED. Downstream elevation, near completion, showing tail race and trestle used to carry excavated rock and construction materials across tail race. Photo c. 1909.
- WV-27-15 Credit PED. Downstream elevation of plant in operation; note transformers to left of building. Photo c. 1936.
- WV-27-16 Credit JTL. East elevation
- WV-27-17 Credit PED. View of power house and dam from operator's house, looking toward Maryland. Note the absence of transformers adjacent to power house. Photo c. 1910.
- WV-27-18 Credit JTL. View of power house and dam from operator's house, looking toward Maryland.
- WV-27-19 Credit PED. View of open forebay, showing installation of turbine pit gates. Photo c. 1909.
- WV-27-20 Credit CM. Water flowing through head gates (at left), into open forebay of power house. Note wooden stair enclosure in turbine pit 1. Photo c. 1936.
- WV-27-21 Credit CM. Water flowing into forebay through head gates at left. Photo c. 1936.
- WV-27-22 Credit JTL. View of south and west facades of power house, along with exterior transformer bank.
- WV-27-23 Credit JTL. View of east elevation of power house and dam.
- WV-27-24 Credit JTL. South elevation.
- WV-27-25 Credit JTL. West elevation
- WV-27-26 Credit JTL. View dam into Turbine pit 1, with two dual runner, Leffel turbines.
- WV-27-27 Credit JTL. Turbine pit 1, Leffel turbines and wicket gates.

- WV-27-28 Credit JTL. Turbine pit 1, close view of turbine wicket gates and access plate into turbine.
- WV-27-29 Credit JTL. View down into unfinished Turbine pit 3.
- WV-27-30 Credit PED. View of original substation, located on the hill above the power house. Transformers destroyed by fire in 1919.
- WV-27-31 Credit PED. Exterior transformer bank, showing cylindrical lighting arrestors on pad behind metal switch tower. Photo c. 1936.
- WV-27-32 Credit JTL. Exterior transformer bank; note lightning arrestors removed from pad and smaller arrestors installed on transformers and in area near air switches.

#### Interior views

- WV-27-33 Credit PED. General interior view. Note wooden operator's booth and stair enclosure on left wall. Photo c. 1910.
- WV-27-34 Credit JTL. General interior view looking north.
- WV-27-35 Credit CM. General interior view, before construction of operator's booth. Photo c. 1909.
- WV-27-36 Credit JTL. View of Generator unit 2 and exciter belt.
- WV-27-37 Credit JTL. Combard Type "O" governor and generator Unit 1.
- WV-27-38 Credit JTL. Generator Unit 1 and upper sheave wheel.
- WV-27-39 Credit JTL. View into main power console, knife throw circuit breakers and oil circuit breaker.
- WV-27-40 Credit JTL. View down into sheave pit No. 1, showing lower sheave wheel.

#### Miscellaneous

- WV-27-41 Credit TR. Dam No. 4 after 1936 flood; break as seen from upstream side. Photo c. 1936.
- WV-27-42 Credit TR. Dam No. 4 after 1936 flood; break as seen from upstream. Note original timber cribbing to left. Photo c. 1936.
- WV-27-43 Credit TR. Reconstruction of Dam No. 4 after 1936 flood. Pouring concrete for new dam section; opening at left for flume to remove water from behind coffer dam. Photo c. 1936

- WV-27-44 Credit TR. Dam No. 4 after 1936 flood from downstream showing break closed and installation of new concrete cap piece under way. Photo c. 1936.
- WV-27-45 Credit TR. Dam No. 4 after 1936 flood. Note coffer dam which is visible below roadway. Photo c. 1936.
- WV-27-46 Credit TR. Dam No. 4 after 1936 flood from Maryland side. Note workman placing concrete cap on dam at left.
- WV-27-47 Credit PEP. View of interior of Martinsburg Plant, showing switchboard as modified to accommodate interconnection with Dam 4 and Dam 5 plants. Photo c. 1920.

ADDENDUM  
FOLLOWS...

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## HISTORIC AMERICAN ENGINEERING RECORD

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Dam No. 4 Hydroelectric Plant  
Shepherdstown vicinity  
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West Virginia

HAER No. WV-27

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- WV-27-48 View of Dam 4 looking between turbine pit and powerhouse.
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- WV-27-63 View of HAER Principal Architect, Eric DeLony, photographing interior of power plant.